



QUALITY MANAGEMENT SYSTEM CERTIFIED BY LLOYD'S REGISTER

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Telefono 0444.968211 - Fax 0444.963836
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37
Telefono 0471.924111 - Fax 0471.924497

Cliente / Besteller/Purchaser/Client

VALBRUNA U.K. LTD.
OLDBURY ROAD
B70 9BH - WEST BROMWICH B70 9BH GB - GB.

Produttore : **ACCIAIERIE VALBRUNA S.P.A.**
Hersteller/Item/Usine produttrice

Stato di fornitura : Hot rolled - Annealed Cold Drawn
Lieferzustand / Delivery state
Etat de livraison

Avviso di Spedizione: D-VI15019899
Lieferanzeige/Packing list/B.L.

Ordine nr: 506047656 Sheffield
Bestell
Your order
Commande

Tipi di Elaborazione: E+AOD
Erschmelzungsart/Melting process/Mode d'elaboration

Certificato nr: MEST722156/2015/

Prüfung/Test/Essai

Conferma ordine nr: EI15005843

Werks/Our Order/Ref nr.

Marchio di Fabbrica:

Zeichen des Lieferwerkes
Trade mark
Sigle de l'usine produttrice

Punzone del Collaudatore:
Stempel des Werksachverständigen
Inspector's stamp/Poinçon de l'assesseur



MR

Specifiche:
Anforderungen / Requirements / Exigences

VAL STOCK 2010 1.4404/316L A,CF
AMS 5648 L S31600 A
ASME SA182 2013 S31603 A (1)
ASME SA479 2013 S31600 A (4)
ASTM A182 2014A S31603 (7)
ASTM A276 2013A S31603 A,CF
ASTM A370 2014 .
EN 10088-3 2005 1.4401 A,CF
EN 10272 2007 1.4404 A,CF
NACE MR0103 2010 S31603 A
QQ-S-763 F 316 A,CF

AISI 316
AMS 5653 H S31603 A,CF
ASME SA276 2013 S31600 A,CF (2)
ASME SA479 2013 S31603 A (5)
ASTM A262 2013 PRACTICE E
ASTM A314 2008 S31600
ASTM A479 2014 S31600 A
EN 10088-3 2005 1.4404 A,CF
ISO 6892-1 2009 .
NACE MR0175 2009 S31600 A (8)
QQ-S-763 F 316L A,CF

AISI 316L
ASME SA182 2013 S31600 A (0)
ASME SA276 2013 S31603 A,CF (3)
ASTM A182 2014A S31600 A (6)
ASTM A276 2013A S31600 A,CF
ASTM A314 2008 S31603
ASTM A479 2014 S31603 A
EN 10272 2007 1.4401 A,CF
NACE MR0103 2010 S31600 A
NACE MR0175 2009 S31603 A (9)

- (0)SEC. II PT.A 2013 EDITION
- (1)SECTION II PT.A 2013 EDITION
- (2)SEC. II PT.A 2013 EDITION
- (4)SECTION II PT.A 2013 EDITION
- (6)For products machined directly from bar refer also
- (7)For products machined directly from bar refer also
- (8)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15
- (9)ANSI/NACE MR0175/ISO 15156-3, second edition 2009-10-15

- (0)For products machined directly from bar refer to ASME SA479.
- (1)For products machined directly from bar refer to ASME SA479.
- (3)SECTION II PT.A 2013 EDITION
- (5)SECTION II PT.A 2013 EDITION
- (6)to ASTM A479.
- (7)to ASTM A479.
- (8)Technical circular 1:2011 Published 2011-06-14
- (9)Technical circular 1:2011 Published 2011-06-14

Qualità: 1.4401/1.4404/316/316L

Werkstoff/Grade/Nuance

Marca: MVAPML
Markenbezeichnung Brand/Nuance MAXIVAL

Tolleranza: h11 - DIN668/EN10278
Tolleranza/Allowance/Tolerance

Punzonatura: 1.4401/4/316/L
Kennzeichnung/Marking/Marquage

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - mm Abmessungen Dimension Dimension	Lunghezza - mm Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pieces	Peso - KG Gewicht Weight Poids	Lotto nr. Loehr. Lot nr. Lot nr.
0020	Hexagon	32,000	3190/ 3190	266824		827,0	431707820

TEST ALLO STATO DI FORNITURA

Test on delivery condition Prüfung auf lieferbarem produkt test a l'etat de fourniture Prueba sobre el material así como entregado

TEST	Provetta/Probestab Specimen/Eprouvette Larg diam Spess. Breite Diam Dicke Width Diam Thickness Larg. diam. epais mm	°C	Posiz. Saggio Dispositivo Location Emplacement 1)	Snervamento Streckgrenze Yield Stress Limite elastique Rp 0,2% N/mm2	Snervamento Streckgrenze Yield Stress Limite elastique Rp 1% N/mm2	Resistenza Zugfestigkeit Tensile strength Resistance à traction Rm N/mm2	Allungamento Bruchdehnung Elongation Allongement		Strizione Einschnürung Reduction of area Striction		Resilienza Kerbschlagarbeit Impact Value Resilience KV J			Durezza Härte Hardness Dureté HB	
							A5 %	E 4d %	Z %	RA %	100	140 235			
Valori richiesti Anforderungen/Required values Valeurs demandées		min max		207	235	517 900	20	30	-	50	100	140 235			
A	10	20	L	432	508*	656	47	49	66	66	172	189	198	221	

TEST ALLO STATO DI FORNITURA

Test on delivery condition / Prüfung auf lieferbarem produkt / Test a l'etat de fourniture / Prueba sobre el material así como entregado

TEST	min	max
B Grain size for ASTM E112		5

Mechanical properties according to ASTM A370.
Tensile testing according to EN ISO 6892-1

FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

Vicenza, 14/07/15

Il collaudatore di stabilimento / der Werksachverständige / Works inspector / L'agent d'usine



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Erschmelzungsart/Melting process/Mode d'elaboration

Certificato nr: MEST722156/2015/
Prüfung/Test/Essai

Conferma ordine nr: E115005843
Werks/Our Order/Ref nr.

Marchio di Fabbrica:
Zeichen des Lieferwerkes
Trade mark
Sigle de l'usine productrice



Punzone del Collaudatore:
Stempel des Werkssachverständigen
Inspector's stamp/Poinçon de l'essayeur

MR

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Coilata /Heat Schmelze/Coulée	min - max	-	1,25 2,00	16,50 18,00	2,00 2,50	-	10,00 13,00	-	0,040	0,030	0,100	-	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	P %	S %	N %						
266824	0,018	0,48	1,47	16,80	2,08	0,52	10,00	0,031	0,027	0,062						

Intergranular corrosion test per ASTM A262 pract. E: ok.

Absence of cracks at 20 x magnification after bend test.

I. Korrosion nach EN ISO 3651-2A Sensibilisierung : T1 : OK

Corrosion test per EN ISO 3651-2A sensitized T1 : OK

Reduction ratio = 36,8 : 1

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind it. Anlage erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été trouvé conforme aux exigences

Controllo antimescolanza: OK
Verwechslungsprüfung: spectralanalytisch durchgeführt
Antimixing testing performed: OK
Contrôle antimelange fait: r.a.s.

Controllo visivo e dimensionale: soddisfa le esigenze
Besichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks: satisfactory
Contrôle visuel et dimensions: satisfaisant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury contamination

We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.

The Quality Management System is Certified acc. Pressure Equipment Directive '97/23/EC' Annex 1, s. 4.3 by TUEV and LLOYD'S

Any act of tampering, modification, alteration, counterfeiting and/or falsification and/or any other action which modifies the contents of this test certificate shall constitute a violation of applicable civil and criminal laws. Acciaierie Valbruna shall protect its rights and interests before any competent court, authority and jurisdiction.

Maximal and/or Valplus grades/products are manufactured with ladle techniques to control composition, distribution, size and shape of non-metallic inclusions for improved machinability.

The supplied product conforms to requirements expressly requested by the purchaser and conforms to requirements specified by certified norms and standards. Should the product be used for more severe, critical and/ or in any case different applications than those the material is generally intended for, any different and/or supplementary requirements shall be specifically demanded, at least, upon order of the Product by the Purchaser. Acciaierie Valbruna SpA shall not be responsible for any improper use of the Products.

FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

F11499
3/8" BSP HEX FULL SOCKET 10K 316L

Vicenza, 14/07/15

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